Welcome to STN International! Enter x:x

LOGINID:ssspta1623paz

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

```
Welcome to STN International
                  Web Page URLs for STN Seminar Schedule - N. America
NEWS
NEWS
         Apr 08
                  "Ask'CAS" for self-help around the clock
NEWS
         Jun 03
                 New e-mail delivery for search results now available
                 PHARMAMarketLetter(PHARMAML) - new on STN
         Aug 08
 NEWS
                 Aquatic Toxicity Information Retrieval (AQUIRE)
 NEWS
         Aug 19
                  now available on STN
         Aug 26
                  Sequence searching in REGISTRY enhanced
NEWS
         Sep 03
                  JAPIO has been reloaded and enhanced
NEWS
NEWS
         Sep 16
                 Experimental properties added to the REGISTRY file
         Sep 16
NEWS
                 CA Section Thesaurus available in CAPLUS and CA
NEWS 10
         Oct 01
                 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 11
         Oct 24
                 BEILSTEIN adds new search fields
                 Nutraceuticals International (NUTRACEUT) now available on
NEWS 12
         Oct 24
STN
NEWS 13
         Nov 18
                 DKILIT has been renamed APOLLIT
                 More calculated properties added to REGISTRY
NEWS 14
         Nov 25
NEWS 15
         Dec 04
                 CSA files on STN
                 PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS 16
         Dec 17
NEWS 17
                 TOXCENTER enhanced with additional content
         Dec 17
                 Adis Clinical Trials Insight now available on STN
NEWS 18
         Dec 17
NEWS 19
         Jan 29
                 Simultaneous left and right truncation added to COMPENDEX,
                 ENERGY, INSPEC
NEWS 20
         Feb 13
                 CANCERLIT is no longer being updated
NEWS 21
         Feb 24
                 METADEX enhancements
NEWS 22
         Feb 24
                 PCTGEN now available on STN
NEWS 23
         Feb 24
                 TEMA now available on STN
NEWS 24
         Feb 26
                 NTIS now allows simultaneous left and right truncation
NEWS 25
         Feb 26
                 PCTFULL now contains images
                 SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 26
         Mar 04
NEWS 27
         Mar 20
                 EVENTLINE will be removed from STN
NEWS 28
         Mar 24
                 PATDPAFULL now available on STN
NEWS 29
         Mar 24
                 Additional information for trade-named substances without
                 structures available in REGISTRY
NEWS 30
                 Display formats in DGENE enhanced
         Apr 11
                 MEDLINE Reload
NEWS 31
         Apr 14
                 Polymer searching in REGISTRY enhanced
NEWS 32
         Apr 17
                 Indexing from 1947 to 1956 being added to records in
NEWS 33
         Apr 21
CA/CAPLUS
NEWS 34
                 New current-awareness alert (SDI) frequency in
         Apr 21
                 WPIDS/WPINDEX/WPIX
                 RDISCLOSURE now available on STN
NEWS 35
         Apr 28
                 Pharmacokinetic information and systematic chemical names
NEWS 36
         May 05
                 added to PHAR
                 MEDLINE file segment of TOXCENTER reloaded
NEWS 37
         May 15
         May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated
```

US 1996-700237 A119960820 US 1998-128917 A119980804 US 2000-492011 A120000126

FAN	PA	95:7974 TENT NO			DATE		APPLICATION NO. DATE	
PI			7	<b>A1</b>	19950615		WO 1994-US14213 19941209	
					, DK, ES,	FR,	GB, GR, IE, IT, LU, MC, NL, PT, SI US 1993-165392 A 19931210	Ξ
	US	546850	5	A	19951121		US 1993-165392 19931210 US 1992-843485 B219920228	
		951338 690949			19950627 19980507		•	
	EP	732915		A1	19960925		US 1993-165392 A 19931210 WO 1994-US14213W 19941209 EP 1995-904865 19941209	
		732915		B1	20000809		GB, GR, IE, IT, LI, LU, MC, NL, PT	Γ,
SE						٠	US 1993-165392 A 19931210	
	JP	095094	01	T2	19970922		WO 1994-US14213W 19941209 JP 1994-516372 19941209 US 1993-165392 A 19931210	
	ΑT	195250		E	20000815		WO 1994-US14213W 19941209 AT 1995-904865 19941209 US 1993-165392 A 19931210	
	US	646164	0 .	B1	20021008		WO 1994-US14213W 19941209 US 1997-967619 19971112 US 1993-165392 A 19931210 WO 1994-US14213W 19941209	
FAN	199	95:8675:	96				US 1995-569584 B119951208	
	PA				DATE	•	APPLICATION NO. DATE	
PI	WO	W: A	J, BR,		, KR, NZ		WO 1994-US11325 19941005	_
	IIS	RW: A'		CH, DE		FR,	GB, GR, IE, IT, LU, MC, NL, PT, SE US 1993-132507 A 19931005 US 1993-132507 19931005	S
	0.0	310233					US 1990-598880 A319901015 US 1991-740703 A219910805	
		947967 683312			19950501 19971106			
	מיש	722470		A1	19960724		US 1993-132507 A 19931005 WO 1994-US11325W 19941005 EP 1994-930616 19941005	
		722470		B1	20000816		GB, GR, IE, IT, LI, LU, MC, NL, PT	Г,
SE				,	,,,		,,,,	•
							US 1993-132507 A 19931005	
	JP	0950,60	12	T2	19970617		WO 1994-US11325W 19941005 JP 1994-511013 19941005 US 1993-132507 A 19931005	
		0950,603 195541		T2 E	19970617		WO 1994-US11325W 19941005 JP 1994-511013 19941005	

ΡI	US 5462990				
FI	03 3402990		10001		US 1990-598880 A319901015
					US 1991-740703 A219910805
	US 5380536	Α	19950110		US 1991-740703 19910805
	08 3360336	A	19930110		
	G3 0153315	7.7	10050413		US 1990-598880 A319901015
	CA 2173317	AA	19950413		CA 1994-2173317 19941005
					US 1993-132507 A 19931005
	WO 9509883				WO 1994-US11325 19941005
•	W: AU, BR,				
	RW: AT, BE,	CH, DE	, DK, ES,	FR,	GB, GR, IE, IT, LU, MC, NL, PT, SE
					US 1993-132507 A 19931005
	AU 9479679	A1	19950501 19971106		AU 1994-79679 19941005
	AU 683312	B2	19971106		•
					US 1993-132507 A 19931005
					WO 1994-US11325W 19941005
	EP 722470	A1	19960724		EP 1994-930616 19941005
	EP 722470	B1	19960724 20000816		
					GB, GR, IE, IT; LI, LU, MC, NL, PT,
SE		•		·	
					US 1993-132507 A 19931005
					WO 1994-US11325W 19941005
	JP 09506012	Т2	19970617		JP 1994-511013 19941005
	01 03300012				US 1993-132507 A 19931005
					WO 1994-US11325W 19941005
	AT 195541	E	20000915		AT 1994-930616 19941005
	AI 195541		20000913		US 1993-132507 A 19931005
					WO 1994-US11325W 19941005
	EG 0150004	m a	20010201		
	ES 2152334	13	20010201		ES 1994-930616 19941005
	110 5565440	A	10061000		US 1993-132507 A 19931005
	US 5567440	A	19961022		US 1995-471390 19950606
					US 1990-598880 B319901015
					US 1991-740703 A219910805
		_			US 1993-132507 A319931005
	US 5627233	Α	19970506		US 1995-465949 19950606
					US 1990-598880 A319901015
			•		US 1991-740703 A219910805
					US 1993-132507 A319931005
	US 5849839	Α.	19981215		US 1997-826294 19970327
					US 1990-598880 B219901015
					US 1991-740703 A219910805
					US 1993-132507 A319931005
					US 1995-465949 All9950606
	US 6231892	B1	20010515		US 1997-969910 19971113
	•				US 1990-598880 B119901015
					US 1994-336393 A319941110
FAN	1995:1006705				
	PATENT NO.	KIND	DATE		APPLICATION NO. DATE
PΙ	US 5468505	Α	19951121		US 1993-165392 19931210
					US 1992-843485 B219920228
		•			US 1993-22687 A219930301
	US 5410016	A	19950425		US 1993-22687 19930301
		- <del>-</del>			US 1990-598880 A219901015
	•				US 1991-740703 A219910805
					US 1992-843485 B219920228
	CA 2178487	AA	19950615		CA 1994-2178487 19941209
	CA 2178487	C	20010828		
		-	2022020		US 1993-165392 A 19931210
	WO 9515747	A1	19950615		WO 1994-US14213 19941209
	W: AU, CA,		1000010		1011
	H. AU, CA,	O.E			

```
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
                                           US 1993-165392 A 19931210
                                                            19941209
     AU 9513381
                       A1
                            19950627
                                           AU 1995-13381
     AU 690949
                            19980507
                                           US 1993-165392 A 19931210
                                           WO 1994-US14213W 19941209
     EP 732915
                       A1
                            19960925
                                           EP 1995-904865
                                                            19941209
     EP 732915
                       B1
                            20000809
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
                                           US 1993-165392 A 19931210
                                           WO 1994-US14213W 19941209
     JP 09509401
                       T2
                            19970922
                                           JP 1994-516372
                                           US 1993-165392 A 19931210
                                           WO 1994-US14213W 19941209
                            20000815
                                           AT 1995-904865 19941209
     AT 195250
                       Ε
                                           US 1993-165392 A 19931210
                                           WO 1994-US14213W 19941209
     ES 2151952
                       T3
                            20010116
                                           ES 1995-904865
                                                            19941209
                                           US 1993-165392 A 19931210
                                           US 1997-967619 19971112
                            20021008
    US 6461640
                       В1
                                           US 1993-165392 A 19931210
                                           WO 1994-US14213W 19941209
                                           US 1995-569584 B119951208
FAN
    1996:467217
                                           APPLICATION NO. DATE
     PATENT NO.
                      KIND
                            DATE
                                           -----
                                           US 1992-958870
                            19960625
                                                            19921007
PI
    US 5529914 ·
                       Α
                                           US 1990-598880 B219901015
                                           US 1991-740632 A319910805
                                           US 1991-740703 A219910805
                                           US 1992-843485 B219920228
                                           US 1992-870540 A219920420
                                           US 1991-740632
                                                           19910805
    US 5232984
                            19930803
                                           US 1990-598880 A319901015
                                           US 1991-740703
    US 5380536
                       Α
                            19950110
                                                           19910805
                                           US 1990-598880 A319901015
    WO 9316687
                       A1
                            19930902
                                           WO 1993-US1776 19930301
         W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ,
             PL, RO, RU, SD, SK, UA
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                            19930913
                                           AU 1993-37809
                                                            19930301
    AU 9337809
                       A1
                       B2
    AU 683209
                            19971106
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                                           WO 1993-US1776 A 19930301
                                                            19930301
                            19941214
                                           EP 1993-907078
     EP 627912
                       A1
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                                           WO 1993-US1776 W 19930301
     JP 07506961
                       T2
                            19950803
                                           JP 1993-515100
                                                            19930301
    JP 3011767
                       B2
                            20000221
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
```

	•			
•				· ·
				US 1992-958870 A 19921007 WO 1993-US1776 W 19930301
	US 5573934	A	19961112	US 1993-24657 19930301
				US 1992-870540 B219920420 US 1992-958870 A219921007
	BR 9306041	A	19971118	BR 1993-6041 19930301
				US 1992-843485 A 19920228 US 1992-870540 A 19920420
				US 1992-958870 A 19921007
		_		WO 1993-US1776 W 19930301
	CA 2117584	С	19980922	CA 1993-2117584 19930301 US 1992-843485 A 19920228
				US 1992-870540 A 19920420 ·
	HC E0E0746	Α	19990112	US 1992-958870 A 19921007 US 1995-377911 19950125
	US 5858746	А	19990112	US 1992-870540 B219920420
		•		US 1992-958870 A219921007
	US 5834274	A	19981110	US 1993-24657 Al19930301 US 1995-467693 19950606
		••	13301110	US 1992-870540 B219920420
				US 1992-958870 A219921007 US 1993-24657 A319930301
	US 5843743	Α	19981201	US 1995-467815 19950606
				US 1992-843485 B219920228
				US 1992-870540 B219920420 US 1992-958870 A219921007
				US 1993-24657 A319930301
	US 5801033	Α	19980901	US 1995-480678 19950607 US 1992-843485 B219920228
				US 1992-843483 B219920228 US 1992-870540 B219920420
	,			US 1992-958870 Al19921007
	US 6258870	B1	20010710	US 1997-783387 19970113 US 1992-843485 B219920228
				US 1992-870540 B219920420
				US 1992-958870 A319921007 US 1995-484160 B319950607
	US 6231892	В1	20010515	US 1997-969910 19971113
			•	US 1990-598880 B119901015
	US 6465001	В1	20021015	US 1994-336393 A319941110 US 1998-33871 19980303
				US 1992-870540 B219920420
	•		•	US 1992-958870 A219921007 US 1993-24657 A319930301
				US 1994-232054 A319940428
				US 1995-467693 A119950606 US 1995-475175 A219950607
	US 2002058318	A1	20020516	US 2001-811901 20010319
				US 1992-843485 B219920228
				US 1992-870540 B219920420 US 1992-958870 A319921007
				US 1995-484160 B319950607
	US 2003087985	Δ1	20030508	US 1997-783387 Al19970113 US 2001-910663 20010719
	05 2003007303	***		US 1990-598880 B119901015
				US 1992-843485 B219920228 US 1992-870540 B219920420
				US 1992-958870 A219921007
				US 1993-22687 All9930301
				US 1994-336393 A219941110 US 1995-379848 A219950127
	,			US 1995-510089 B119950801
				•

•

.

FA		1996:717008 PATENT NO.	KIND	DATE	APPLICATION NO. DATE
P	I	US 5573934	Α	19961112	US 1993-24657 19930301 US 1992-870540 B219920420
		US 5529914	A	19960625	US 1992-958870 A219921007 US 1992-958870 19921007 US 1990-598880 B219901015
					US 1991-740632 A319910805 US 1991-740703 A219910805 US 1992-843485 B219920228
		US 5858746	A	19990112	US 1992-870540 A219920420 US 1995-377911 19950125
					US 1992-870540 B219920420 US 1992-958870 A219921007 US 1993-24657 A119930301
	,	US 5834274	A	19981110	US 1995-467693 19950606 US 1992-870540 B219920420 US 1992-958870 A219921007
		US 5843743	A	19981201	US 1993-24657 A319930301 US 1995-467815 19950606
			**	1001202	US 1992-843485 B219920228 US 1992-870540 B219920420 US 1992-958870 A219921007
		US 6465001	B1	2,0021015	US 1992-958870 A219921007 US 1993-24657 A319930301 US 1998-33871 19980303 US 1992-870540 B219920420
					US 1992-958870 A219921007 US 1993-24657 A319930301
					US 1994-232054 A319940428 US 1995-467693 A119950606 US 1995-475175 A219950607
F <i>F</i>		1998:755871 PATENT NO.	KIND	DATE	APPLICATION NO. DATE
PJ	[ 1	US 5837747	A	19981117	US 1994-232054 19940428 US 1991-784267 B219911029 WO 1992-US9364 A 19921029
		WO 9309176	A3	19930513 19930722 , BR, CA,	WO 1992-US9364 19921029 CH, CS, DE, DK, ES, FI, GB, HU, JP, KP,
		KR, LK, RW: AT, BE,	LU, MG	, MN, MW, C, DK, ES,	NL, NO, PL, RO, RU, SD, SE, US FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, GN, ML, MR, SN, TD, TG
	i	US 5700848 .	A	19971223	US 1991-784267 A219911029 US 1995-472191 19950607 US 1991-784267 B219911029
		US 5705270	A	19980106	US 1994-232054 A319940428 US 1995-482970 19950607 US 1991-784267 B219911029
	,	US 5846530	A	19981208	US 1994-232054 A319940428 US 1995-475175 19950607 US 1991-784267 B219911029
	Ī	US 6465001	B1	20021015	US 1994-232054 A319940428 US 1998-33871 19980303 US 1992-870540 B219920420
					US 1992-958870 A219921007 US 1993-24657 A319930301 US 1994-232054 A319940428
		,			US 1995-467693 A119950606 US 1995-475175 A219950607

Crosslinkable polysaccharides, polycations and lipids which are capable of undergoing free radical polymn. are used for encapsulation of drugs, biol. materials and cells, as well as manuf. of bioadhesives and wound dressing. Alginic acid was reacted with acryloyl chloride in presence of Et3NH2 under N for 24h to obtain alginate acrylate (I). A polymd. crosslinked gel was prepd. contg. I 0.1, acrylamide 0.1, water 3.75, glycerol 1.25, methylene bisacrylamide 0.01g. The gels can be prepd. as flat sheets that can be applied to wounds. ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS L17Polymer-catalyzed synthesis of acid anhydrides TI 1990:234482 CAPLUS AΝ 112:234482 DN Polymer-catalyzed synthesis of acid anhydrides ΤI IN Fife, Wilmer K.; Zhang, Zhi Dong PΑ Indiana University Foundation, USA U.S:, 10 pp. Cont.-in-part of U.S. Ser. No. 52,439. SO CODEN: USXXAM DT Patent English LΑ FAN.CNT 1 APPLICATION NO. DATE KIND DATE PATENT NO. \_ \_ \_ \_ 19891017 19881213 US 1988-284846 PIUS 4874558 Α US 1987-52439 19870521 CASREACT 112:234482; MARPAT 112:234482 OS Acid anhydrides are prepd. by reaction of carboxylic acids or carboxylate AΒ salts with acid halides or acyl-activating agents (e.g., SOC12) at O.degree. to room temp. in the presence of catalysts selected from: (a) solid copolymers of 4-vinylpyridine, (b) solid copolymers of 4-vinylpyridine 1-oxide, and (c) water-sol. homopolymers of 4-vinylpyridine 1-oxide. Thus, reaction of Me(CH2)4COCl with PhCO2H using Reillex 425 catalyst (crosslinked 4-vinylpyridine copolymer) in CH2Cl2 at 0.degree. for 10 min to give Me(CH2)4CO2COPh with 94.6% yield and 100% selectivity. Alternatively, use of EtCO2H and SOC12 at 22-25.degree. in CH2Cl2 with the same catalyst gave 96.0% (EtCO) 20. Use of acid halides and Na formate with a type (b) catalyst gave various mixed formic anhydrides. A type (c) catalyst was used with halides and carboxylate salts in H2O-CH2Cl2 mixts. L17 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS Synthesis of (meth) acrylic anhydride from (meth) acrylic acid AN1988:22432 CAPLUS 108:22432 DN Synthesis of (meth)acrylic anhydride from (meth)acrylic acid TIHurtel, Patrice; Laurent, Denis; Rondini, Joseph IN Societe Chimique des Charbonnages, Fr. PA Fr. Demande, 5 pp. SO CODEN: FRXXBL DT Patent LA French FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. \_ - - -A1 19870626 FR 1985-19116 19851224 PΙ FR 2592040

NEWS 39 May 16 CHEMREACT will be removed from STN

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

FILE 'HOME' ENTERED AT 11:57:21 ON 16 MAY 2003

=> file reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 11:57:28 ON 16 MAY 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 15 MAY 2003 HIGHEST RN 516445-69-5 DICTIONARY FILE UPDATES: 15 MAY 2003 HIGHEST RN 516445-69-5

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

E1 1 METHACRYLIC AMIDE/CN
E2 1 METHACRYLIC AMIDE-METHYL METHACRYLATE-TRIMETHYLOLPROPANE
TRI

METHACRYLATE COPOLYMER/CN
E3 1 --> METHACRYLIC ANHYDRIDE/CN
E4 1 METHACRYLIC ANHYDRIDE POLYMER/CN
E5 1 METHACRYLIC ANHYDRIDE, POLYMER WITH 1,3,6-DIOXATHIOCANE/CN
E6 1 METHACRYLIC ANHYDRIDE, POLYMER WITH 1,3,6-TRIOXOCANE/CN

```
METHACRYLIC ANHYDRIDE, POLYMER WITH 1,3-DIOXOLANE/CN
             1
E7
                   METHACRYLIC ANHYDRIDE, POLYMER WITH
E8
             1
1-(ALLYLOXY)-3-(DODECYLT
                   HIO) -2-PROPANOL/CN .
                   METHACRYLIC ANHYDRIDE, POLYMER WITH ACRYLIC ANHYDRIDE/CN
E9
             1
                   METHACRYLIC ANHYDRIDE, POLYMER WITH MALEIC ANHYDRIDE/CN
E10
             1
                   METHACRYLIC ANHYDRIDE, POLYMER WITH METHYL METHACRYLATE/CN
E11
             1
                   METHACRYLIC ANHYDRIDE, POLYMER WITH TETRAHYDROFURAN/CN
E12
             1
=> e3
             1 "METHACRYLIC ANHYDRIDE"/CN
L1
=> d l1
     ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
L1
     760-93-0 REGISTRY
     2-Propenoic acid, 2-methyl-, anhydride (9CI)
                                                   (CA INDEX NAME)
OTHER CA INDEX NAMES:
    Methacrylic anhydride (6CI, 8CI)
OTHER NAMES:
    Methacrylic acid anhydride
CN
CN
     Methacryloyl anhydride
FS
     3D CONCORD
MF
     C8 H10 O3
CI
     COM
     STN Files: BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS,
LC
CASREACT,
       CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, HODOC*, HSDB*, IFICDB,
IFIPAT,
      ·IFIUDB, MSDS-OHS, PIRA, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources: EINECS**, NDSL**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
 H<sub>2</sub>C O
           O CH<sub>2</sub>
           Me-C-C-O-C-C-Me
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**
             495 REFERENCES IN FILE CA (1957 TO DATE)
              76 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             495 REFERENCES IN FILE CAPLUS (1957 TO DATE)
              25 REFERENCES IN FILE CAOLD (PRIOR TO 1967)
=> e methacrylic acid/cn
                   METHACRYLESTER C 13, POLYMER WITH BUTYL
             1
2-METHYL-2-PROPENOAT
                   E, ETHENYLBENZENE, METHYL 2-METHYL-2-PROPENOATE,
1,2-PROPANE
                   DIOL MONO (2-METHYL-2-PROPENOATE) AND 2-PROPENOIC ACID/CN
                   METHACRYLESTER C 13, POLYMER WITH
             1
N, N-DIMETHYL-N-2-PROPENYL-
                   2-PROPEN-1-AMINIUM CHLORIDE/CN
E3
             1 --> METHACRYLIC ACID/CN
                 METHACRYLIC ACID .BETA.-CHLOROETHYL ESTER/CN
E4
                   METHACRYLIC ACID .BETA.-ISOCYANATOETHYL ESTER/CN
E5
```

```
METHACRYLIC ACID 2,2-DIETHYLHYDRAZIDE/CN
             1
E7
                   METHACRYLIC ACID 2-AMINOETHYL ESTER, ACETATE/CN
                   METHACRYLIC ACID 2-ETHYL-2-METHYLHYDRAZIDE/CN
E8
                   METHACRYLIC ACID 2-ETHYL-2-PROPYLHYDRAZIDE/CN
             1
                   METHACRYLIC ACID 2-HYDROXYETHANESULFONIC ACID ESTER/CN
             1
E10
                   METHACRYLIC ACID 2-METHYL-2-PROPYLHYDRAZIDE/CN
             1
E11
E12
                   METHACRYLIC ACID 3,4-DICHLOROANILIDE/CN
=> e3
             1 "METHACRYLIC ACID"/CN
L2
=> d 12
     ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
L_2
     79-41-4 REGISTRY
RN
     2-Propenoic acid, 2-methyl- (9CI)
                                         (CA INDEX NAME)
CN
OTHER CA INDEX NAMES:
     Methacrylic acid (8CI)
OTHER NAMES:
     .alpha.-Methacrylic acid
CN
     .alpha.-Methylacrylic acid
CN
     2-Methyl-2-propenoic acid
CN
     2-Methylacrylic acid
CN
CN
     GE 110
CN
     Loctite 3298
CN
     Methylacrylic acid
CN
     Norsocryl MAA
FS
     3D CONCORD
     463311-95-7
DR
MF
     C4 H6 O2
CI
     COM
                  ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*,
LC
     STN Files:
BIOBUSINESS,
       BIOSIS, BIOTECHNO, CA, CANCERLIT; CAOLD, CAPLUS, CASREACT, CBNB, CEN,
       CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU,
       DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,
       ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
       MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT,
       RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2,
       USPATFULL, VTB
         (*File contains numerically searchable property data)
                    DSL**, EINECS**, TSCA**
     Other Sources:
         (**Enter CHEMLIST File for up-to-date regulatory information)
```

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

17684 REFERENCES IN FILE CA (1957 TO DATE)
8643 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
17697 REFERENCES IN FILE CAPLUS (1957 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

```
=> e acetic anhydride/cn
E1
            1
                   ACETIC ACRYLIC ANHYDRIDE/CN
E2
                   ACETIC ALDEHYDE/CN
            1 --> ACETIC ANHYDRIDE/CN
E3
                 ACETIC ANHYDRIDE 1:2 COMPLEX WITH THIONYL CHLORIDE/CN
E4
                  ACETIC ANHYDRIDE LABELED WITH CARBON-14/CN
E6
                  ACETIC ANHYDRIDE, BI COMPLEX/CN
                  ACETIC ANHYDRIDE, BISMUTH COMPLEX/CN
E7
                   ACETIC ANHYDRIDE, CD COMPLEX/CN
E8
                   ACETIC ANHYDRIDE, COMPD. WITH
1,4-DIAZABICYCLO(2.2.2)OCTANE/
                   CN
                   ACETIC ANHYDRIDE, COMPD. WITH 2-AMINOBENZOTHIAZOLE
3-OXIDE/C
E11
                   ACETIC ANHYDRIDE, COMPD. WITH 2-PICOLINE/CN
             1
                   ACETIC ANHYDRIDE, COMPD. WITH 2-PICOLINE (1:1)/CN
E12
=> e3
             1 "ACETIC ANHYDRIDE"/CN
L3
=> d 13
    ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
1.3
    108-24-7 REGISTRY
RN
    Acetic acid, anhydride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
    Acetic anhydride (8CI)
OTHER NAMES:
    Acetic oxide
CN
CN
    Acetyl acetate
    Acetyl anhydride
CN
CN
    Acetyl ether
    Acetyl oxide
CN
    Ethanoic anhydride
CN
FS
    3D CONCORD
    C4 H6 O3
MF
    COM
CI
                  AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
LC
    STN Files:
       BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, DIPPR*,
       EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*,
       HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC,
       PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA,
       ULIDAT, USPAT2, USPATFULL, VTB
         (*File contains numerically searchable property data)
     Other Sources: DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
```

Ac- 0- Ac

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

13726 REFERENCES IN FILE CA (1957 TO DATE)
338 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13747 REFERENCES IN FILE CAPLUS (1957 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE TOTAL ENTRY SESSION 18.50 18.71

FILE 'CAPLUS' ENTERED AT 11:58:54 ON 16 MAY 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 16 May 2003 VOL 138 ISS 21 FILE LAST UPDATED: 15 May 2003 (20030515/ED)

£.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> 11 L4 495 L1

=> 12

L5 17696 L2

=> 13

L6 13752 L3

=> 11 and 12

495 L1

17696 L2

L7 98 L1 AND L2

=> 14 and 15

L8 98 L4 AND L5

=> 18 and 16

L9 · 15 L8 AND L6

=> phenothiazine

16182 PHENOTHIAZINE

4067 PHENOTHIAZINES

L10 17149 PHENOTHIAZINE

(PHENOTHIAZINE OR PHENOTHIAZINES)

=> hydroquinone

41691 HYDROQUINONE

2212 HYDROQUINONES

L11 42497 HYDROQUINONE

(HYDROQUINONE OR HYDROQUINONES)

```
=> \110 or 111
          1678 \L10
                  ('L10')
         44175 \L10 OR L11
L12
=> 110 or 111
         59272 L10 OR L11
L13
=> 19 and 113
             3 L9 AND L13
L14
=> d 114 1-3 ti fbib abs
     ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS
     Process for the batch manufacture of (meth)acrylic anhydrides
TТ
AN
     2003:20007 CAPLUS
DN
TI
     Process for the batch manufacture of (meth)acrylic anhydrides
TN
     Dupont, Bernard; Paul, Jean-Michel
     Atofina, Fr.
PA
     Eur. Pat. Appl., 8 pp.
SO
     CODEN: EPXXDW
DT
     Patent
LA
     French
FAN.CNT 1
     PATENT NO.
                      KIND
                            DATE
                                           APPLICATION NO.
                                                             DATE
                            20030108
                                           EP 2002-291695
                                                             20020705
     EP 1273565
                       A1
PΙ
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
                                            FR 2001-9009
                                                           A 20010706
     FR 2826961
                       Α1
                            20030110
                                            FR 2001-9009
                                                             20010706
     US 2003018217
                       Α1
                            20030123
                                            US 2002-186017
                                                             20020628
                                            FR 2001-9009
                                                           A 20010706
     JP 2003040832
                            20030213
                                            JP 2002-191878
                       A2
                                                             20020701
                                            FR 2001-9009
                                                           A 20010706
                                            CN 2002-140293
     CN 1396149
                            20030212
                                                             20020704
                       Α
                                            FR 2001-9009
                                                           A 20010706
     (meth)acrylic anhydrides are prepd. in a batch process by reacting acetic
AB
     anhydride with either acrylic acid or methacrylic acid with elimination
of
     a part of the formed acetic acid followed by its replacement in the
     reaction mixt. with acetic anhydride and/or (meth)acrylic acids.
              THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS
     Dehydration process and catalyst for the preparation of methacrylic
     anhydride from methacrylic acid and acetic anhydride
AN
     2002:610347 CAPLUS
DN
     137:155284
     Dehydration process and catalyst for the preparation of methacrylic
ΤI
     anhydride from methacrylic acid and acetic anhydride
     Schmitt, Bardo; Knebel, Joachim; Klesse, Wolfgang; Wittkowski, Andrea;
ΙN
     Laux, Bededikt
     Roehm G.m.b.H. & Co. K.-G., Germany
PA
     Eur. Pat. Appl., 6 pp.
     CODEN: EPXXDW
DT
     Patent
LA
     German
```

FAN.CNT 1

```
KIND DATE
                                          APPLICATION NO. DATE
     PATENT NO.
                    ·----
                                         _____
     ------
                     A1 20020814
                                         EP 2002-2119 20020129
     EP 1231201
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                                          DE 2001-10106352A 20010209
                                          DE 2001-10106352 20010209
     DE 10106352
                      A1
                           20020822
                           20020925
                                          JP 2002-29706
     JP 2002275124
                      A2
                                                         20020206
                                          DE 2001-10106352A 20010209
                           20021031
    US 2002161260
                      A1
                                          US 2002-68849
                                                          20020211
                                          DE 2001-10106352A 20010209
    Methacrylic anhydride is manufd. by the dehydration of methacrylic acid
AB
     and acetic anhydride in the presence of a catalyst (e.g., chromium
     acetate) and a polymn. inhibitors (e.g., phenothiazine and
    hydroquinone).
             THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 5
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
     Synthesis of (meth) acrylic anhydride from (meth) acrylic acid
ΤI
    1988:22432 CAPLUS
AN
    108:22432
DN
    Synthesis of (meth)acrylic anhydride from (meth)acrylic acid
ΤI
    Hurtel, Patrice; Laurent, Denis; Rondini, Joseph
IN
    Societe Chimique des Charbonnages, Fr.
PA
    Fr. Demande, 5 pp.
SO
    CODEN: FRXXBL
DT
     Patent
LΑ
    French
FAN.CNT 1
                     KIND DATE
     PATENT NO.
                                          APPLICATION NO. DATE
                     ----
                      A1
                           19870626
                                                          19851224
PΙ
    FR 2592040
                                          FR 1985-19116
                      B1
                           19880715
    FR 2592040
                      A1 '
                                          EP 1986-402759
    EP 231689
                           19870812
                                                           19861211
    EP 231689
                     B1
                           19901003
        R: AT, BE, CH, DE, ES, GB, GR, IT, LI, LU, NL, SE
                                          FR 1985-19116
                                                           19851224
                                          AT 1986-402759
                      E
                           19901015
                                                           19861211
    AT 57177
                                          FR 1985-19116
                                                           19851224
                                          EP 1986-402759
                                                           19861211
                                          JP 1986-316041
     JP 62158237
                      A2
                           19870714
                                                           19861224
     JP 03035304
                      B4
                           19910527
                                          FR 1985-19116
                                                           19851224
                                          US 1988-188585
    US 4857239
                           19890815
                                                           19880429
                                          FR 1985-19116
                                                           19851224
                                          US 1986-945989
                                                           19861224
AB
    The reaction of (meth)acrylic acid with Ac20 in the absence of a catalyst
     and the presence of a polymn. inhibitor gives (meth) acrylic anhydride
     (i.e., for use in monomer prepn.) in high yield with min. formation of
     impurities. The AcOH is removed during the reaction. A mixt. of 430
     parts methacrylic acid and 255 parts Ac20, contg. 2000 ppm
    phenothiazine and 2000 ppm methylene blue, was heated at
     48-63.degree./50-100 mm with removal of AcOH, followed by distn. in vacuo
```

=> logff hold

0 LOGFF

to give 335 parts methacrylic anhydride.

29061 HOLD

20908 HOLDS

49248 HOLD

(HOLD OR HOLDS)

(LOGFF(W)HOLD)

0 LOGFF HOLD

=> logoff hold

SINCE FILE COST IN U.S. DOLLARS TOTAL ENTRY SESSION FULL ESTIMATED COST 20.44 39.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION

CA SUBSCRIBER PRICE -1.95 -1.95

SESSION WILL BE HELD FOR 60 MINUTES STN INTERNATIONAL SESSION SUSPENDED AT 12:05:36 ON 16 MAY 2003

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1623paz

## PASSWORD:

\* \* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \* SESSION RESUMED IN FILE 'CAPLUS' AT 12:14:32 ON 16 MAY 2003 FILE 'CAPLUS' ENTERED AT 12:14:32 ON 16 MAY 2003 COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	20.44	39.15
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-1.95	-1.95

## => d his

(FILE 'HOME' ENTERED AT 11:57:21 ON 16 MAY 2003)

FILE 'REGISTRY' ENTERED AT 11:57:28 ON 16 MAY 2003 E METHACRYLIC ANHYDRIDE/CN

L11 E3

E METHACRYLIC ACID/CN

L21 E3

E ACETIC ANHYDRIDE/CN

L31 E3

FILE 'CAPLUS' ENTERED AT 11:58:54 ON 16 MAY 2003

L4495 L1 L5 17696 L2

L6 13752 L3

L7 98 L1 AND L2 L8 98 L4 AND L5 L9 15 L8 AND L6

L10 17149 PHENOTHIAZINE L11, 42497 HYDROQUINONE

L12 44175 \L10 OR L11 L13 59272 L10 OR L11 L14 3 L9 AND L13 L15 0 LOGFF HOLD

=> catalyst

624191 CATALYST 624225 CATALYSTS

L16 798956 CATALYST

(CATALYST OR CATALYSTS)

=> 19 and 116

L17 8 L9 AND L16

=> d 117 1-8 ti

- L17 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Dehydration process and catalyst for the preparation of methacrylic anhydride from methacrylic acid and acetic anhydride
- L17 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Synthesis and polymerization of epoxy methacrylates, 2 acylated epoxy methacrylates and their copolymers
- L17 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Organoborane-amine complex initiator systems and polymerizable compositions made therewith
- L17 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Crosslinkable polysaccharides, polycations and lipids useful for encapsulation of drugs and cells and manufacture of wound dressings
- L17 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Polymer-catalyzed synthesis of acid anhydrides
- L17 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Synthesis of (meth)acrylic anhydride from (meth)acrylic acid
- L17 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI Continuous manufacture of carboxylic anhydrides
- L17 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS
- TI .alpha.,.beta.-Unsaturated acids and anhydrides

## => d 117 1-8 ti fbib abs

- L17 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2003 ACS
- Dehydration process and catalyst for the preparation of methacrylic anhydride from methacrylic acid and acetic anhydride
- AN 2002:610347 CAPLUS
- DN 137:155284
- TI Dehydration process and catalyst for the preparation of methacrylic anhydride from methacrylic acid and acetic anhydride
- IN Schmitt, Bardo; Knebel, Joachim; Klesse, Wolfgang; Wittkowski, Andrea;
  Laux, Bededikt
- PA Roehm G.m.b.H. & Co. K.-G., Germany
- SO Eur. Pat. Appl., 6 pp. CODEN: EPXXDW
- DT Patent
- LA German

FAN.CNT 1

APPLICATION NO. DATE PATENT NO. KIND DATE -----\_\_\_\_\_ \_\_\_\_\_ ----20020814 EP 2002-2119 20020129 PΙ EP 1231201 **A1** R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR DE 2001-10106352A 20010209 20020822 DE 2001-10106352 20010209 A1 DE 10106352 JP 2002-29706 A2 20020925 20020206 JP 2002275124 DE 2001-10106352A 20010209 US 2002161260 A1 20021031 US 2002-68849 20020211 DE 2001-10106352A 20010209

AB Methacrylic anhydride is manufd. by the dehydration of methacrylic acid and acetic anhydride in the presence of a **catalyst** (e.g., chromium acetate) and a polymn. inhibitors (e.g., phenothiazine and hydroquinone).

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS

TI Synthesis and polymerization of epoxy methacrylates, 2 acylated epoxy methacrylates and their copolymers

AN 2001:455945 CAPLUS

DN 135:195876

TI Synthesis and polymerization of epoxy methacrylates, 2 acylated epoxy methacrylates and their copolymers

AU Kammer, Silvio; Keomara, Kim; Sandner, Barbara; Schreiber, Ramona

CS Institut fur Technische und Makromolekulare Chemie, Martin-Luther-Universitat, Halle/Saale, D-06099, Germany

SO Macromolecular Materials and Engineering (2001), 286(5), 276-284 CODEN: MMENFA; ISSN: 1438-7492

PB Wiley-VCH Verlag GmbH

DT Journal

LA English

AB Partially (20-75%) acylated isopropylidene-bis[1,4-phenylene oxy(2-hydroxy

trimethylene)] dimethacrylate (BisGMA) was prepd. by a single step reaction of 2,2-bis[4-(2,3-epoxy propoxy)phenyl]propane (DGEBA) with methacrylic acid (MAA), methacrylic anhydride (MAAn) and/or acetic anhydride catalyzed by 0.8 mol-% N-Me imidazole at 90-100.degree.C. In any case, MAA was substituted by an equimolar quantity of the anhydride. The reaction kinetics of DGEBA with MAA and MAAn follows a first order

law

up to a conversion of epoxy groups corresponding to the initial molar ratio of MAAn. The viscosity of BisGMA decreased with an increase in the acylation degree. Acylated BisGMA was copolymd. with triethylene glycol dimethacrylate by use of a redox initiator system at room temp. and with vinyltoluene (VT) initiated by di-tert-Bu peroxide at 150-200.degree.C, resp., both in the presence of 70-76 wt.-% of quartz filler. Different dependencies of the content of sol and the conversion of C=C double bonds were obsd. for thermally polymd. composites from VT with acetylated and methacrylated BisGMA, resp. Methacrylated BisGMA yielded composites with reduced water uptake. The higher network d. of the polymer matrix with methacrylated BisGMA resulted in a higher glass transition temp. Tg and a higher storage modulus of the composites. The initial temp. of wt. loss of composites with VT was increased from 230.degree.C for composites with BisGMA up to 258.degree.C for composites with BisGMA methacrylated to a degree of 40%.

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
    Organoborane-amine complex initiator systems and polymerizable
     compositions made therewith
AN
     1998:268527 CAPLUS
     128:322549
DN
     Organoborane-amine complex initiator systems and polymerizable
TI
     compositions made therewith
     Pocius, Alphonsus V.; Deviny, E. John
TN
    Minnesota Mining and Manufacturing Co., USA
PA
     PCT Int. Appl., 58 pp.
SO
     CODEN: PIXXD2
DT
     Patent
T.A
    English
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
                     ----
                                         WO 1997-US2766
PΙ
                      A1
                           19980430
                                                          19970225
     WO 9817694
        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
            DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
            RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU,
            AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
             IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
            MR, NE, SN, TD, TG
                                           US 1996-735765 A 19961023
                                          US 1996-735765
                            19990810
                                                            19961023
    US 5935711
                                           AU 1997-19684
                                                            19970225
     AU 9719684
                      Α1
                            19980515
                                           US 1996-735765 A 19961023
                                           WO 1997-US2766 W 19970225
    EP 934344
                      A1
                            19990811
                                           EP 1997-907773
                                                            19970225
    EP 934344
                      B1
                            20021023
        R: DE, FR, GB
                                           US 1996-735765 A 19961023
                                           WO 1997-US2766 W 19970225
                                           BR 1997-12554
    BR 9712554
                            19991019
                                                            19970225
                                           US 1996-735765 A 19961023
                                           WO 1997-US2766 W 19970225
     CN 1234041
                            19991103
                                           CN 1997-198945
                                                            19970225
                                           US 1996-735765 A 19961023
     JP 2001502689
                      T2
                            20010227
                                           JP 1998-519319
                                                            19970225
```

OS MARPAT 128:322549

AB A compn. comprises organoborane-amine complex and aziridine-functional material. The compn. can form a part of a polymn. initiator system that also includes a compd. such an acid that is reactive with the amine portion of the complex to liberate the organoborane. The system is useful

for initiation of polymn. of acrylic monomer in formation of acrylic adhesives that have exceptionally good adhesion to low surface energy polymers. A typical adhesive contained Me methacrylate (I) 8.45, Bu acrylate 6.08, Et acrylate-I copolymer thickener 6.73, methacrylic acid (amine-reactive compd.) 1.24, CX 100 [tris(methylaziridine) of trimethylolpropane triacrylate] 5.17, and Et3B-1,6-hexanediamine complex 2.33 g.

US 1996-735765 A 19961023 WO 1997-US2766 W 19970225

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2003 ACS
TI Crosslinkable polysaccharides, polycations and lipids useful for

```
encapsulation of drugs and cells and manufacture of wound dressings
     1993:525199 CAPLUS
AN
DN
     119:125199
TI
     Crosslinkable polysaccharides, polycations and lipids useful for
     encapsulation of drugs and cells and manufacture of wound dressings
     Soon-Shiong, Patrick; Desai, Neil P.; Sandford, Paul A.; Heintz, Roswitha
IN
     A.; Sojomihardjo, Soebianto
PA
     Clover Consolidated, Ltd., Switz.
SO
     PCT Int. Appl., 53 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LΑ
FAN.CNT 12
                      KIND
                                            APPLICATION NO.
     PATENT NO.
                            DATE
                                                             DATE
                      ----
                            19930513
                                            WO 1992-US9364
                                                             19921029
PΙ
                       A2
     WO 9309176
                            19930722
     WO 9309176
                       Α3
             AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP,
             KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF,
             BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG
                                            US 1991-784267 A219911029
                                            AU 1993-31247
     AU 9331247
                       A1
                            19930607
                                                             19921029
                                            US 1991-784267 A 19911029
                                            WO 1992-US9364 A 19921029
     EP 610441
                       A1
                            19940817
                                            EP 1992-925046
                                                             19921029
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE
                                            US 1991-784267 A 19911029
                                            WO 1992-US9364 W 19921029
                                            US 1994-232054
     US 5837747
                            19981117
                                                             19940428
                                            US 1991-784267 B219911029
                                            WO 1992-US9364 A 19921029
PATENT FAMILY INFORMATION:
    1992:497329
     PATENT NO.
                      KIND
                            DATE
                                            APPLICATION NO.
                                                             DATE
                                            -----
                            19920430
                                            WO 1991-US7051
PΙ
     WO 9206678
                       A1
                                                             19910925
         W: AU, CA, JP, KR, NO
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE
                                            US 1990-598880 A 19901015
                            19920520
                                            AU 1991-87557
     AU 9187557
                       A1
                                                             19910925
                                            US 1990-598880 A 19901015
                                            WO 1991-US7051 A 19910925
                                            EP 1991-918587
     EP 553195
                       A1
                            19930804
                                                             19910925
     EP 553195
                       B1
                            19970611
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
                                            US 1990-598880 A 19901015
                                            WO 1991-US7051 W 19910925
     AT 154242
                       Ε
                            19970615
                                            AT 1991-918587
                                                             19910925
                                            US 1990-598880 A 19901015
     ES 2104727
                       T3
                            19971016
                                            ES 1991-918587
                                                             19910925
                                            US 1990-598880 A 19901015
     US 5820882
                            19981013
                                            US 1994-336393
                                                             19941110
                       Α
                                            US 1990-598880 A119901015
     US 6231892
                       В1
                            20010515
                                            US 1997-969910
                                                             19971113
                                            US 1990-598880 B119901015
                                            US 1994-336393 A319941110
    1993:610747
FAN
                                            APPLICATION NO.
     PATENT NO.
                      KIND
                            DATE
                                                             DATE
                      _ _ _ _
                            19930902
                                            WO 1993-US1776
                                                             19930301
```

PΙ

WO 9316687

A1

```
AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, NZ,
             PL, RO, RU, SD, SK, UA
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
     US 5529914
                            19960625
                                           US 1992-958870
                                                             19921007
                                           US 1990-598880 B219901015
                                            US 1991-740632 A319910805
                                           US 1991-740703 A219910805
                                           US 1992-843485 B219920228
                                           US 1992-870540 A219920420
     AU 9337809
                       Α1
                            19930913
                                           AU 1993-37809
                                                            19930301
     AU 683209
                       B2
                            19971106
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                                           WO 1993-US1776 A 19930301
     EP 627912
                      A1
                            19941214
                                           EP 1993-907078 19930301
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                                           WO 1993-US1776 W 19930301
                                           JP 1993-515100
     JP 07506961
                       T2
                            19950803
                                                             19930301
     JP 3011767
                       B2
                            20000221
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                                           WO 1993-US1776 W 19930301
                       Α
                                           BR 1993-6041
     BR 9306041
                            19971118
                                                             19930301
                                           US 1992-843485 A 19920228
                                           US 1992-870540 A 19920420
                                           US 1992-958870 A 19921007
                                           WO 1993-US1776 W 19930301
FAN
    1993:656535
     PATENT NO.
                      KIND DATE
                                           APPLICATION NO.
                                                            DATE
                      ----
                                            -----
                            19930916
                                           WO 1993-US1773
                                                             19930301
PΙ
     WO 9317669
                      A1
           AU, BB, BG, BR, CA, CZ, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO,
         NZ, PL, RO, RU, SD, SK, UA
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
                                           US 1992-843485 A 19920228
                            19931005
                                           AU 1993-37353
                                                             19930301
     AU 9337353
                       A1
                       B2
     AU 673160 ·
                            19961031
                                           US 1992-843485 A 19920228
                                           WO 1993-US1773 A 19930301
     EP 627911
                       A1
                            19941214
                                           EP 1993-906255
                                                             19930301
     EP 627911
                       B1
                            20001025
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT,
SE
                                           US 1992-843485 A 19920228
                                           WO 1993-US1773 W 19930301
                                           JP 1993-515790
     JP 07507056
                       T2
                          19950803
                                                             19930301
     JP 3011768
                       B2
                            20000221
                                           US 1992-843485 A 19920228
                                           WO 1993-US1773 W 19930301
    BR 9306038
                      Α
                            19980113
                                           BR 1993-6038
                                                         19930301
                                           US 1992-843485 A 19920228
                                           WO 1993-US1773 W 19930301
```

	CA 2117588	С	19980825	CA 1993-2117588 19930301
	AT- 197125	E	20001115	US 1992-843485 A 19920228 AT 1993-906255 19930301 US 1992-843485 A 19920228
	ES 2153378	Т3	20010301	WO 1993-US1773 W 19930301 ES 1993-906255 19930301
FAN	1995:599622	WT.	D	US 1992-843485 A 19920228
	PATENT NO.	KIND	DATE	APPLICATION NO. DATE
PI	US 5410016	Α	19950425	US 1993-22687 19930301 US 1990-598880 A219901015 US 1991-740703 A219910805 US 1992-843485 B219920228
	US 5380536	Α	19950110	US 1991-740703 19910805 US 1990-598880 A319901015
	US 5468505	A	19951121	US 1993-165392 19931210 US 1992-843485 B219920228
	US 5626863	Α	19970506	US 1993-22687 A219930301 US 1995-379848 19950127 US 1992-843485 B219920228
	•			9 US 1993-22687 A319930301
	US 5567435	Α .	19961022	US 1995-468364 19950606 US 1992-843485 B219920228 US 1993-22687 A319930301
•	US 5986043	A	19991116	US 1995-379848 A319950127 US 1996-700237 19960820 US 1992-843485 B219920228
				US 1993-22687 A319930301 US 1995-379848 A319950127 US 1995-468364 A319950606
	US 6231892	B1	20010515	US 1997-969910 19971113 US 1990-598880 B119901015
	US 6060582	A	20000509	US 1994-336393 A319941110 US 1998-128917 19980804 US 1992-843485 B219920228
			•	US 1993-22687 A319930301 US 1995-379848 A319950127 US 1995-468364 A319950606 US 1996-700237 A119960820
	US 6306922	B1	20011023	US 2000-492011 20000126 US 1992-843485 B219920228 US 1993-22687 A319930301
				US 1995-379848 A319950127 US 1995-468364 A319950606 US 1996-700237 A119960820 US 1998-128917 A119980804
	US 2003087985 ,	A1	20030508	US 2001-910663 20010719 US 1990-598880 B119901015 US 1992-843485 B219920228 US 1992-870540 B219920420
				US 1992-958870 A219921007 US 1993-22687 A119930301 US 1994-336393 A219941110 US 1995-379848 A219950127
	US 2002091229	<b>A1</b>	20020711	US 1995-510089 B119950801 US 2001-21508 20011022 US 1992-843485 B219920228 US 1993-22687 A319930301 US 1995-379848 A319950127 US 1995-468364 A319950606
		•		
				•

.

```
FR 2592040
                  B1
                       19880715
EP 231689
                  A1
                       19870812
                                       EP 1986-402759
                                                        19861211
EP 231689
                  В1
                       19901003
    R: AT, BE, CH, DE, ES, GB, GR, IT, LI, LU, NL, SE
                                       FR 1985-19116
                                                        19851224
                       19901015
                                       AT 1986-402759
AT 57177
                                                        19861211
                                       FR 1985-19116
                                                        19851224
                                       EP 1986-402759
                                                        19861211
                                       JP 1986-316041
JP 62158237
                  A2
                       19870714
                                                        19861224
JP 03035304
                       19910527
                                       FR 1985-19116
                                                        19851224
                  Α
                       19890815
                                       US 1988-188585
                                                        19880429
US 4857239
                                       FR 1985-19116
                                                        19851224
                                       US 1986-945989
                                                        19861224
The reaction of (meth)acrylic acid with Ac2O in the absence of a
catalyst and the presence of a polymn. inhibitor gives
(meth)acrylic anhydride (i.e., for use in monomer prepn.) in high yield
with min. formation of impurities. The AcOH is removed during the
reaction. A mixt. of 430 parts methacrylic acid and 255 parts Ac20,
contg. 2000 ppm phenothiazine and 2000 ppm methylene blue, was heated at
48-63.degree./50-100 mm with removal of AcOH, followed by distn. in vacuo
to give 335 parts methacrylic anhydride.
```

- ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS L17
- Continuous manufacture of carboxylic anhydrides ΤI
- AN1986:610785 CAPLUS
- DN 105:210785
- Continuous manufacture of carboxylic anhydrides ΤI
- Bott, Kaspar; Anderlohr, Axel; Faust, Tillmann; Guth, Josef IN
- BASF A.-G. , Fed. Rep. Ger. PA
- SO Ger. Offen., 7 pp.

CODEN: GWXXBX

DT Patent

LA German

AB

FAN.CNT 1

	~ 1 1 1	-											
	PA	TENT 1	. OV	•	KIND	DATE			API	PLICATI	ON NO.	DATE	
											<del>-</del>		
ΡI	DE	35100	035		A1	1986	0925		DE	1985-3	510035	·1985032	20
	JΡ	6121	5345		A2	1986	0925		JP	1986-5	2779	1986031	12
	JP	0602	1101		B4	1994	0323				•		
		•							DE	1985-3	510035	1985032	20
	EP	19652	20		A1	1986	1008		EP	1986-1	03449	1986031	14
		R:	AT,	BE,	CH, DE	, FR,	GB,	IT,	LI, N	1L .			
									DE	1985-3	510035	1985032	20
	ES	55319	99		A1	1987	0116		ES	1986-5	53199	1986032	20
									DE	1985-3	510035	1985032	20

(RCO)20 (R = satd. or unsatd. C2-12 residue) are prepd. by acid-catalyzed AB reaction of Ac20 with the corresponding acid. A packed distn. column with

.apprx.15 theor. plates, 1.5 m tall, having an internal diam. of 5 cm, was

maintained at 30 mbar. At the 5th plate, 340 g/h Ac20 was added, and at the 10th plate, 5 g MeSO3H in 430 g methacrylic acid was added hourly.

Αt the column head (reflux ratio 5), 300 g AcOH and 85 g Ac2O were removed, while at the bottom, 385 g/h 99.4% pure methacrylic anhydride was removed.

- ANSWER 8 OF 8 CAPLUS COPYRIGHT 2003 ACS L17
- .alpha.,.beta.-Unsaturated acids and anhydrides TI
- AN 1978:460243 CAPLUS

DN 89:60243

TI .alpha.,.beta.-Unsaturated acids and anhydrides

IN Holmes, Jerry D.

PA Eastman Kodak Co., USA

SO U.S., 4 pp. CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
				·	
ΡI	US 4085143	Α	19780418	US 1975-583937	19750605
				US 1975-583937	19750605

AB The title compds. were manufd. from HCHO and a satd. acid anhydride having

1 less carbon atom than the desired product in the vapor phase over a fixed-bed catalyst. A catalyst was prepd. by refluxing 72 g TiCl4 in hexane with 100 g Davision G-59 silica gel for 5 h, washing with hexane, and hydrolyzing with aq. NH4OH. The catalyst (50 mL) was heated 2 h at 550.degree. with 2.72 mol/h N flow and then heated in air .apprx.1.5 h at 550.degree.. A mixt. of 1.59 mol HCHO and 2.73 mol acetic anhydride [108-24-7] were fed, along with 1.25 mol/h N, into a reactor at 245-65.degree. contg. the catalyst to yield over a 3 h period a mixt. of acrylic acid [79-10-7] and acrylic anhydride [2051-76-5] with HCHO conversion 48% and acetic anhydride conversion 52%.

=> logoff hold COST IN U.S. DOLLARS	SINCE FILE	TOTAL SESSION
FULL ESTIMATED COST	ENTRY 53.71	72.42
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-7.16	-7.16

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 12:20:13 ON 16 MAY 2003